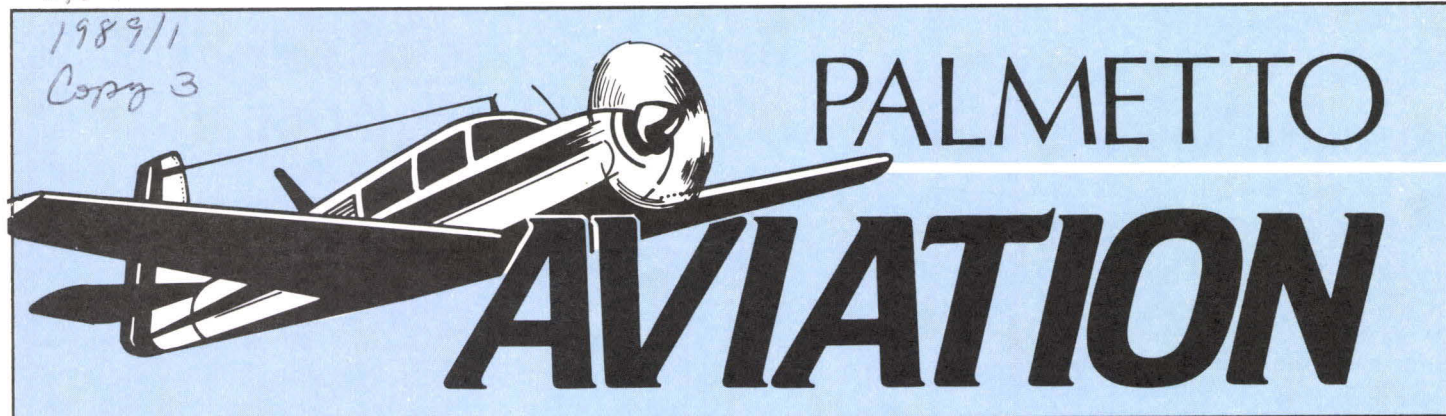


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Volume 41, Number 1

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January, 1989

Agricultural Applicators Convene at Hilton Head

The S.C. Agricultural Applicators Aviation Association will convene later this month on January 26 and 27 at the Marriott's Hilton Head Resort.

"This is a very important convention because of the recertification program that will begin in 1989 for all applicators," said Jack Barry, an officer of the organization.

"Applicators will have two options to receive certification," added Barry. "They may attend training sessions, or they will have to take a written exam administered by the Department of Fertilizer and Pesticide at Clemson's 1989 Recertification Training Pro-

gram."

The \$50 registration fee includes costs for the awards banquet and Friday night reception.

The registration fee for Allied Industries also includes booth space for exhibitors.

"We anticipate between 80 and 100 participants," said Barry.

The convention begins at 2 p.m. on Thursday, Jan. 25 with an introduction for training and welcome address by Dr. Calvin Schoulties.

Other speakers include Dr. Mac Horton from Clemson who will be giving a pre-test for training and Ken Clark from the EPA, Atlanta speaking on farm worker safety.

Other topics include, the New

EPA Program on Endangered Species, S.C. Pesticide Recertification Program, Protecting Bees from Aerial Applied Pesticides and Cancer and Pesticide Exposure.

The training program is especially important this year, according to Barry since the requirements for maintaining licenses have changed.

All applicators will have two ways to be recertified. They may attend a specified number of training session over a five year period, which must be approved by Clemson's Department of Fertilizer and Pesticide Control with assigned Continuing Certification

See Convention, Page 6

Williamsburg Officials Presented Check for Airport Improvement Projects

Williamsburg County recently got a helping hand from the State Aeronautics Commission by way of a check for \$12,500 for airport improvement projects.

Historically, economically deprived counties in South Carolina are the areas most in need of a usable, viable airport according to national statistics, but more often than not, these are the same airports which have difficulty finding local revenue sources to match state and federal dollars.

See Williamsburg, Page 6

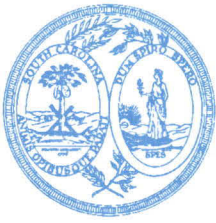
John Hamilton of SCAC (l-r), Commissioner Charles Appleby, Sen. McGill, Rep. Gordon and Rep. Snow announce grant for Williamsburg County in front of the terminal building.



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STATE DOCUMENTS



PALMETTO AVIATION is an official publication of the South Carolina Aeronautics Commission. It is designed to inform members of the aviation community, and others interested in aviation, of local developments in aviation and aviation facilities, and to keep readers abreast of national and international trends in aviation.

The Aeronautics Commission is a state agency created in 1935 by the South Carolina General Assembly to foster and promote air commerce in the state.

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Hawthorne Begins Service at Dulles International

Hawthorne Aircraft Centers of Charleston have announced its subsidiary, Hawthorne Dulles, Inc. will begin a 25-year operating agreement with the Metropolitan Washington Airports Authority to establish a general aviation service operation at the Washington Dulles International Airport in Washington, D.C.

Dean Harton, president of Hawthorne, was pleased with the announcement, "This follows six months of proposal preparation, one year of waiting, and 10 months of intense negotiations. We believe this operation will be a tremendous opportunity for Hawthorne and will add substantially to the visibility of our company."

Harton also commented that

construction should begin as early as February of this year with the opening slated for spring 1990. The operation is planned for three phases and is expected to result in a \$30 million capital investment.

Hawthorne Dulles will provide fuel, storage, maintenance and other services to corporate aircraft at Dulles International, as well as offering fuel and groundhandling services to a number of airfreight airlines and government aircraft.

"The operation will be similar to the Hawthorne Aviation operation in Charleston, but much larger," Harton added.

Hawthorne Corporation is also active in the fields of federal and state service contracting, industrial distribution and real estate.

Keep Your Batteries Safe for Winter

This January, if you plan to store your aircraft for the winter months, Neil Baker, aircraft maintenance supervisor of the Aeronautics Commission has these suggestions.

The first thing is to remove the battery from the aircraft and place it in a warmer climate, perhaps a garage or basement where there will be protected from the harsh elements.

"Always remove the negative posts first, then the positive. And when re-installing hook the positive up first then the negative," urged the state Aeronautics employee.

"Or, if you can't remove the battery," said Baker, "you should find a way to keep the battery charged at least three-quarters of a charge because at three-quarters

charge or 1100 specific gravity, your battery could freeze."

Baker said temperatures as low as 19 degrees F. could cause your battery to start to freeze and will damage the cells and plates.

"The main idea is to keep your battery in a state of charge so that the acids remain in suspension," he added. "When you keep your battery in a state of charge, it takes more drastic temperatures to affect the battery."

"This ultimately should reduce the cost of upkeep and life of your aircraft and you shouldn't have to replace your battery year after year," said Baker.

"Remember your battery is the heart of the electrical system and anything you do to keep it working properly will help maintain your aircraft," he said.

South Carolina Aeronautics Commission Offices are at Columbia Metropolitan Airport. Mailing Address: Post Office Drawer 1987, Columbia, South Carolina, 29202. Phone: (803) 739-5400.

Funding Approved for Airports

Florence Regional Airport, Pelion Corporate Airport, Greenville Downtown Airport, and Sumter Municipal Airport all received funding for projects at the State Aeronautics Commission meeting in Columbia.

The State Aeronautics Commission held their regular monthly meeting in Columbia where commissioners approved \$73,852.90 for airport projects.

When completed, these projects will generate \$680,538.80 in total funding costs when combined with federal grants.

Commission Chairman Edwin Pearlstine announced today the following allocations:

- **Florence Regional Airport** — \$14,502 for developing an exhibition property plat, purchasing an aircraft rescue and firefighting vehicle and constructing a building for the vehicle.

- **Pelion Corporate Airport** —

\$1,613.34 approved for grading and removing hill near runway 17/35 which was in violation.

- **Greenville Downtown Airport** — \$42,637.56 approved to replace medium intensity taxiway lights, remark runway 18/36 and mark north and south aircraft ramps.

- **Sumter Municipal Airport** — \$15,100 granted for rehabilitating apron and taxiway pavement.

Projects for Pelion Airport and Greenville Downtown airports were funded with 50 percent local and 50 percent state funds.

The funding for Florence Regional and Sumter Municipal airports was provided 90 percent by the Federal Aviation Administration and 10 percent from local and state sources.

The commission also gave approval to ask the FAA for federal funds to upgrade all airport beacon systems statewide.

Pre-Applications Due for FAA Airport Grants

According to the AASHTO Monitor, January 31, 1989 is the deadline for preapplications for FY 1989 grant funds under the Airport Improvement Program. Applications received after that date may be deferred by the Federal Aviation Administration

until the following year. Prompt submission of funding requests will allow earlier funding decision by the FAA, and efforts will be made to have projects under grant by August 15, 1989. Applications should be submitted to FAA Field Offices.

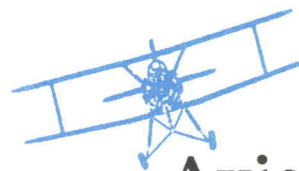
Aviation Safety Video Available

Do you have a VCR at home? That's all it takes to borrow our aviation safety videotape.

Dr. Martin B. Woodward, an Aviation Medical Examiner, the FAA Flight Standards District Office and SCAC have combined efforts to produce a wonderful and informative Drug and Alcohol Awareness Program.

If your flying organization would like to view the tape, please call Helen Munnerlyn 1-800-922-0574 or (803) 739-5423 and she'll send one in the mail. This is a very entertaining and informative presentation on drug and alcohol abuse and lasts less than 30 minutes.

Isn't being safe worth 30 minutes of your time?



Aviation Calendar

January 11

SC Helicopter Association
CAP Building
Columbia

January 19

EAA Chapter 242
State Museum
Columbia

January 22

Breakfast Club
McWhiter Field
Lancaster Airport

Jan 26-27

SC Agricultural
Applicators
Convention
Marriott Resort
Hilton Head

February 5

Breakfast Club
Greenville Downtown

February 19

Breakfast Club
Open Date
Why Not Your Airport?

March 5

Breakfast Club
Open Date

March 19

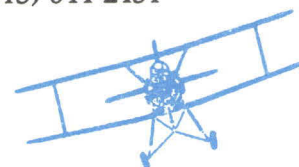
Breakfast Club
Dillon County Airport

March 19-21

Southeast Chapter
AAAE Annual
Conference
Omni Hotel
Charleston, SC

April 9-15

Sun 'n Fun
Lakeland, FL
For information
(813) 644-2431



It's a Bird! It's a Plane! No, It's an Inflatoplane!

Over thirty years ago, an aircraft was invented that would change the face of aeronautics — or so the inventors thought. But instead of a beautiful bird with gossamer wings, Goodyear developed an inflatoplane.

Yes, an inflatable plane. It sounds similar to those inflatable dolls you were tempted to order from the back of a magazine but didn't.

When deflated, the inflatoplane looks like a 250-pound heap of heavy gauge rubber with an engine. But when inflated, looks every bit of a sleek, yet extremely simple, flying machine.

Bill Wetzel, director of Economic Development at Bamberg County and James Tobul, vice president Tobul Accumulators, have acquired an inflatoplane purely by chance.

"You see, I'm a lure collector," said Wetzel, "and I went to see some lures a friend of mine had. When we went into his barn he said, 'You know something about airplanes?' and he showed me this inflatoplane...Now I have it."

Wetzel and Tobul take a great deal of pride in their newly found aircraft which was built by the Goodyear Aircraft Corporation in 1956. Their aircraft which is in perfect condition has been shown at various air shows as a static display and always gets stares.

"People always want to see it fly...They just can't believe it," said Tobul as he inflated the plane in less

Bill Wetzel and James Tobul inflate their Inflatoplane in the Bamberg Airport hangar facility.



than five minutes with its compressor.

Tobul added, "people first think it's a homebuilt when they see it...It's really a show-stopper."

The two who repair antique planes for fun also are proud of the fact that they found the inflatoplane's complete log books—all 50 hours worth.

According to specifications from Goodyear, the inflatoplane has comparable performance capabilities to the J3 Cub and the Aerona 11C.

Rubber gliders were developed for safety reasons, they could bend and bounce when other conventional aircraft would break injuring or killing their occupants.

Once inflated, a rubber glider could become rigid in flight yet withstand crashes that would damage wood, fabric and metal.

The purpose for the inflatoplane was basically a sound concept — to produce a plane for parachute delivery from a military aircraft so a person in a remote area could escape by flight.

At one time, there was an inter-

est by the Army Transportation Corps to use the Inflatoplane as a rescue vehicle. The Army sought the plane for its ideal small package and stable flight characteristics for use as a military panacea.

About 10 Inflatoplanes were built, the first one in just over 12 weeks and flew in 1956. Even though it has limited performance, the first model also convinced the Office of Naval Research to sponsor development of a powerful, much improved evaluation model of the Inflatoplane.

Those 10 models the Goodyear Corporation built for Naval Research and Army Transportation Corps were called GA-468.

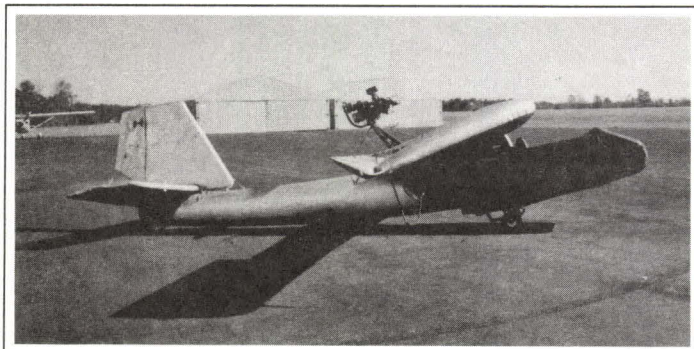
The Inflatoplane project died when the parent company of Goodyear Aircraft Corporation cancelled the production after two accidents.

The planes that were produced for the military were then stored and put away but most have been lost along the way.

One Inflatoplane was donated by Goodyear to the Smithsonian and another to the Franklin Museum in Philadelphia.

Tobul and Wetzel say that they too will soon donate their Inflatoplane to a museum, the Marine Corps Museum in Quantico, Va., where their valuable piece of aviation history will remain.

The Inflatoplane wasn't just a quirk in aviation history it proves that man will try anything once, even a rubber plane.



The final product, a fully inflated inflatoplane with a 42 hp Nelson engine and 20 gallon fuel capacity.



The Civil Air Patrol

This Cadet Has Set Her Goals Out of This World

Maggie Corbett, CAP Cadet MSgt, of the Lexington Composite Squadron has received official notification of an appointment to the Air Force Academy in Colorado.

Corbett is a senior at Lexington High School where she is involved in activities, such as the Air Force Junior Reserve Officers Training Corps.

She has exhibited many outstanding leadership traits and abilities during her two-year involvement with AFJROTC.

Not only is Corbett involved

with ROTC, she is also very active in track, varsity basketball, and the National Honor Society. With the little spare time she has left, she occupies it with horseback riding, swimming, reading and showing cats.

Corbett has set her goals sky high. She hopes to be an astronaut someday and is planning on majoring on astronautical engineering while attending the Air Force Academy.

This past summer, she attended a CAP Encampment at the Air Force

Academy Preparatory School and the Governor's School at the College of Charleston. In 1987, she attended Business Week activities at Presbyterian College and the Space Academy at Huntsville, AL.

Corbett has accomplished many things through her studies, including being selected as a National Merit Semi-Finalist.

The SC Wing of the Civil Air Patrol wishes you the best of luck in the future.

We hope one day we can look into the sky and see her there.

CAP Calendar

January 21

Wing

Staff Commanders Call

Feb. 5

Commanders Call

Feb. 11

Group III

SAR Training

Marion Airport

Feb. 19

Wing Staff Commanders Call

Feb. 25

Cadet Selection Board

March 3-5

SC CAP Wing Conference

Myrtle Beach

March 6

Wing Inspection by

National Headquarters

March 11

Search and Rescue Training

March 12

Search and Rescue Training

Missions Skills and Mission

Air Crew Training

Reminders From the Chief of Staff

January is the time of year for personnel and equipment updates, according to CAP Chief of Staff Bill Walls.

Walls said he needs to know who the assigned persons are on each squadron staff, including rank, address and telephone number by the end of January.

"In addition, all personal equipment issued needs to be re-validated by my office with form 37," said Walls.

Also Walls suggests that squadron Want Lists for any wanted items should be turned in

to his office by Commanders Call in January.

Any request for additional radio equipment should be placed in writing to the chief of staff.

"Please turn in a list of all state equipment with serial numbers and state inventory numbers," said Walls. "All of that information is required for the March 6 National Headquarters Inspection."

"Please don't let me down because this inspection is important to us all. And will reflect on the efficiency of our Wing," said Chief of Staff Walls.

SC CAP Needs You

The SC Wing of the CAP is recruiting statewide for dedicated people to volunteer time to benefit others.

Personal rewards from the program are many: opportunity to strengthen your leadership skills, help in the development of young adults in the Cadet programs, and receive search and rescue training.

For referral for the closest CAP activity in your area contact 1Lt. Delores Rucker, CAP, (803) 359-1171, or write to her at CAP Headquarters, P.O. Box 6541, West Columbia, South Carolina 29171-6541.

Williamsburg Airport Gets Grant

Continued from Page 1

In mid-December, state officials gathered at the Williamsburg Airport to applaud their efforts in restoring the airport which was damaged by state forestry officials during firefighting operations.

Sen. Yancey McGill, Rep. B.J. Gordon, Rep. Bubba Snow and Commissioner Charles Appleby were all on hand to announce the airport improvement projects for the economically depressed county.

Rep. Gordon said, "This is just the beginning, our minds are all set on industrial and economic growth for Williamsburg County."

Commissioner Appleby who presented the check, told the small crowd that he has just completed his first year as commissioner. "I'm pleased to announce in that time, the 6th Congressional District has received over \$3.5 million dollars from the FAA in matching funds and over \$262,613 in state grants for airport improvement projects."

Appleby added, "That means in the one year I've been on the commission, the 6th District has received nearly double the money it was awarded five years before."

Appleby credited the grants to Sen. McGill, Rep. Gordon and Rep. Snow, "who have diligently pushed for economic advancement and improvements for Williamsburg County with Williamsburg County officials and the state Aeronautics Commission."

Appleby also praised the newly elected Sen. McGill, "who has taken on the great responsibility of leading Williamsburg County into the next generation of economic achievements."

The commissioner said, "this is the first of a series of grants from the State Aeronautics Commission which will enhance the Williamsburg County Airport for further economic expansion and de-

Janet Roach of WPDE-TV interviews Sen. Yancey McGill after the Williamsburg County check presentation.



velopment."

Appleby added that the grant is more than just money. "It represents a long term goal of mine, Sen. McGill and I'm sure of all the Williamsburg County Legislative Delegation: To ensure adequate transportation for cargo and businesses, to develop aviation to its fullest extent and to further en-

hance Williamsburg County as an economic leader in South Carolina."

Sen. McGill said, "The main issue here is that the state Aeronautics Commission, through the 6th District Commissioner remembered our rural county. They have not forgotten the rural areas which need them the most."

Convention to instruct applicators

Continued from Page 1

Hours.

One contact hour of relevant training will be equal to one CCH with only training sessions open to the public being approved.

According to the rules, each applicator must acquire 10 CCH's over a five year period to be recertified. The second method of recertification will be to pass a written exam administered by the DFPC from Clemson University.

"In addition to the training program," said Barry. "We will

have, of course, our awards banquet, SCAAA business session, the Ladies' program and also our allied industry cocktail party on Thursday night."

Deadlines for pre-registration is January 22, to qualify for our pre-registration door prize. Or you can register for the convention at the door.

For more information, or a registration form contact Jack Barry, 924 Brantley Street, Columbia, SC 29210, (803) 772-7889.

Complete and mail with payment by Jan. 22, 1989 for pre-registration. Mail to: Jack Barry 924 Brantley St., Columbia, SC 29210. \$50 Registration Fee per person.

Name _____

Representing (Company) _____

Number in Party _____ Do you wish exhibit space? _____

Address _____

City _____ State _____ Zip _____

FYI From the FAA

Calculating Crosswind Landings

By John Doster
FAA's Allentown, PA
District Office

Did you ever hold at the end of a runway and watch crosswind landings being executed? Some airplanes feel for the ground with one wheel, others have twice the drift correction needed, and almost all have much more speed than necessary. You might notice that for some pilots, "executed" was the right description, considering the number of aircraft rendered non-airworthy by poor techniques.

When discussing crosswind landings, you might also notice that pilot's emotion can be directly proportional to his knowledge of the subject: the less he knows, the more emotion. Actually there is no single approved technique. That depends on the pilot, the airplane, and the conditions; you can hold a wing down, crab, or combine the two, FAR 23 and 25 prescribe airworthiness standards that may help develop the most comfortable method for each of us. Remember the objective is a safe landing, not whose method is best.

Design requirements generally consider that landings start back at about 50 feet altitude and at a speed of 1.3 times the stalling speed of the airplane in the landing configuration. Altitude and speed are reduced while retaining full control of the airplane. You can put the airplane on the ground at a speed greater than stalling speed; however, control and stopping problems are multiplied.

Be it a two-place trainer or a four-engine jet, regulations require that there be no uncontrollable ground looping tendencies in 90-

degree crosswind up to a velocity of 0.2 times the stalling speed of the airplane in its landing configuration, and the landing shall not require exceptional piloting skill. So, if your plane stalls at 60 knots, it must be safely controllable in a direct 12-knot crosswind. A faster plane which stalls at 104 knots has to be proven safe in a 21-knot crosswind. Both of these airplanes will have an approximate 12-degree angle of drift.

Most airplane flight manuals will show that the airplane has been tested in crosswinds greater than 0.2 times the stalling speed but are rarely tested above the 25-30 knots.

At 50 ft. altitude with 1.3 times stall, suppose the stalling speed was given as 38 knots, then the approach speed would be about 50 knots. If an average light twin stalls at 61 knots, then the approach speed would be about 80 knots. The JetStar at a 35,000 lb. landing weight stalls at 104 knots, which indicates its approach would be made at about 135. A large airplane, the Boeing 707, at a landing weight of 275,000 lbs. will have about the same numbers as the JetStar.

Up to this point, the size of the airplane does not complicate the basics of a landing. A crosswind of 0.2 times stall will still require about 12 degrees of crab angle. These speeds can be found in either the approved flight manual, from the airspeed indicator, or from instrument panel placards.

Occasionally there may be a need for additional approach speed during gusty wind conditions. A pretty accurate rule-of-thumb indicates that a 10 percent increase in touchdown speed requires about 21 percent additional stopping dis-

tance, so you have to be sure you have enough pavement. That an airspeed of 1.3 times stall equates to a 30 percent margin over stall, so if you think you need an excessive approach speed to handle turbulence and chop, let good judgment overrule pride and consider another airport which might have better wind conditions.

Opinions concerning this additional airspeed range from adding "one-half of the gust factor" to a "little extra for the wife and kiddies." More specific advice may be given in the flight manual! In giving over 7,500 flight checks, I have noticed that approach speeds tend to creep up uncomfortably. This happens during initial training, and as confidence is obtained, speeds drop down but seem to level off a few knots higher than necessary. It is rare to see an approach that is too slow, it is a pleasure to see it right on target.

Give some thought to this idea of making a crosswind landing: line up with the runway and crab into the wind with the wings level. As speed is reduced at or near the touchdown point, PUSH the nose straight down the runway with the rudder. Keep the wings level, or nearly, with the ailerons. After the airplane has made a nice landing (surprised?) continue on the ground using the controls necessary to keep it straight and level down the center of the runway.

They key word is "push"; timing is not that critical. You can do it.

The author of this article is John Doster, Manager of FAA's Allentown, PA District Office and a veteran of 40 years in aviation instruction.



**SOUTH CAROLINA
AERONAUTICS COMMISSION**
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This Month...

Inside Palmetto Aviation

- Hawthorne Makes Plans for Dulles
- Inflatoplane Bounces Out of History
- Agricultural Applicators Convene

... and much, much more!

Fort Jackson Holds Medical Evacuation Exercise

If military conflicts or national emergencies occur any time in the near future, our Armed Forces will be ready, willing and able.

This axiom was tested recently when 16 South Carolina hospitals and Fort Jackson participated in a national disaster medical system exercise.

The exercise was begun at the state Aeronautics Quonset hangar in December as the early morning dew was dissipating.

Nearly 2,000 soldiers participated in the exercise including hospitals all over the state.

The exercise was held to prepare hospitals in case a national disaster occurs during peacetime,

Ft. Jackson recruits participated in a national disaster medical system exercise recently. Here, a "wounded" soldier is taken to the helicopter for transport.



or during wartime when casualties are heavy.

Part of the exercise dealt with assisting and processing patients

into South Carolina hospitals who might come into the United States from various European sites following a disaster.

This publication is printed and distributed by the South Carolina Aeronautics Commission in the interest of aviation safety and to foster growth of responsible aviation in the state. The viewpoints expressed in articles credited to specific sources are presented as the viewpoints of those writers and do not necessarily reflect the opinion of the South Carolina Aeronautics Commission.